



crypto.com

Measuring Global Crypto Users

A Study to Measure Market Size Using On-Chain Metrics

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Research and Insights

Data Report



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Executive Summary

Welcome to the updated version of on-chain market sizing. Compared with our [previous version](#), we have updated our methodology to better estimate recent changes to global crypto adoption.

Key Takeaways

- The number of global crypto users reached 106 million in January 2021
- Strong growth in Bitcoin adoption was the main driver for January's 15.7% increase in the global crypto population
- Likely events that drove crypto adoption was the huge growth of DeFi last summer, PayPal's opening up crypto services, and massive institutional adoption and facilitation of cryptocurrencies.

Introduction

Our [first version of the on-chain market sizing article](#) designed and introduced a methodology that combines on-chain data with some blended parameters to estimate the number of global crypto owners. By the end of May 2020, the number was more than 66 million.

In the latter half of 2020, we have seen accelerated adoption growth due to some remarkable events: the rise of DeFi in the summer, [PayPal](#)'s opening on crypto purchase for the US users in November, and institutional adoption in December (e.g., [Grayscale](#), [MicroStrategy](#)). With this in mind, we decided to review and adjust our methodology to better capture the trend of global adoption.

In this revamp, we updated the following that control our final results:

Item	Description	Old Methodology	Updated Methodology
$r_{BTC\ deposit}$	The percentage of users that withdraw BTC from one exchange to another	Fixed (38%)	Dynamic
$r_{ETH\ deposit}$	The percentage of users that withdraw ETH from one exchange to another	Fixed (38%)	Dynamic
$r_{BTC\&\ ETH}$	The percentage of users that have used both BTC and ETH on-chain	Fixed (24%)	Dynamic
$r_{\overline{BTC\&\ ETH}}$	The percentage of users that own neither BTC nor ETH	Fixed (32%)	Dynamic
Exchanges	The exchanges included in our on-chain data extraction	21 exchanges	24 exchanges

Note: **F**: fixed value calculated in May 2020; **Dynamic**: value re-calculated every month.

For the crypto exchanges captured in our studies, we have added three more exchanges (itBit, HitBTC, Bybit), and now all exchanges included are listed below:

Exchange	Logo
Crypto.com	
Binance	
Bitfinex	
Bittrex	
BitMax	
Bithumb	
Bitstamp	
Gemini	
Huobi	
Kraken	
KuCoin	
OKEx	
Liquid	
BitFlyer	
Gate.io	
Zaif	
Poloniex	
UPbit	
BitMEX	
Deribit	
FTX	
itBit	
HitBTC	
Bybit	

Results

The following tables list the results of each step for the calculation of January 2021 adoption rates for Bitcoin and Ethereum separately.

Estimating Bitcoin Adoption

Step	Parameter (BTC)	Notation	Result
(1)	User deposit rate	$r_{deposit}$	28%
(2)	Total No. of on-chain overlapping addresses	$N_{on-chain \ overlapping \ addresses}$	3,336,825
(3)	Total No. of on-chain addresses (selected exchanges)	$N_{exchange \ total \ addresses}$	20,607,160
(4)	No. of on-chain non-overlapping addresses	$N_{on-chain \ non-overlapping \ addresses} = (3) - (2)$	17,270,335
(5)	Weighted-Average No. of exchanges per user	$k_{addresses \ per \ user}$	3.36
(6)	Selected exchanges' coverage ratio	$r_{total \ market \ share}$	92%
(7)	Total No. of BTC owners	$\frac{[(2) \div (5) + (4)]}{(1) \times (6)}$	~ 71 Mln

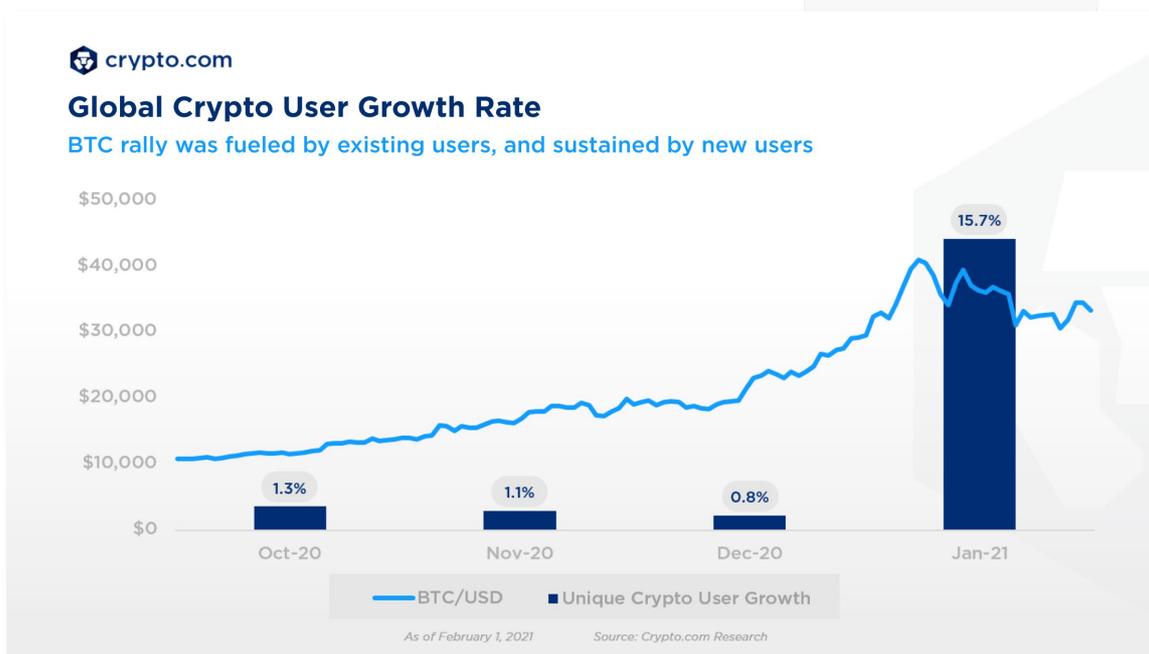
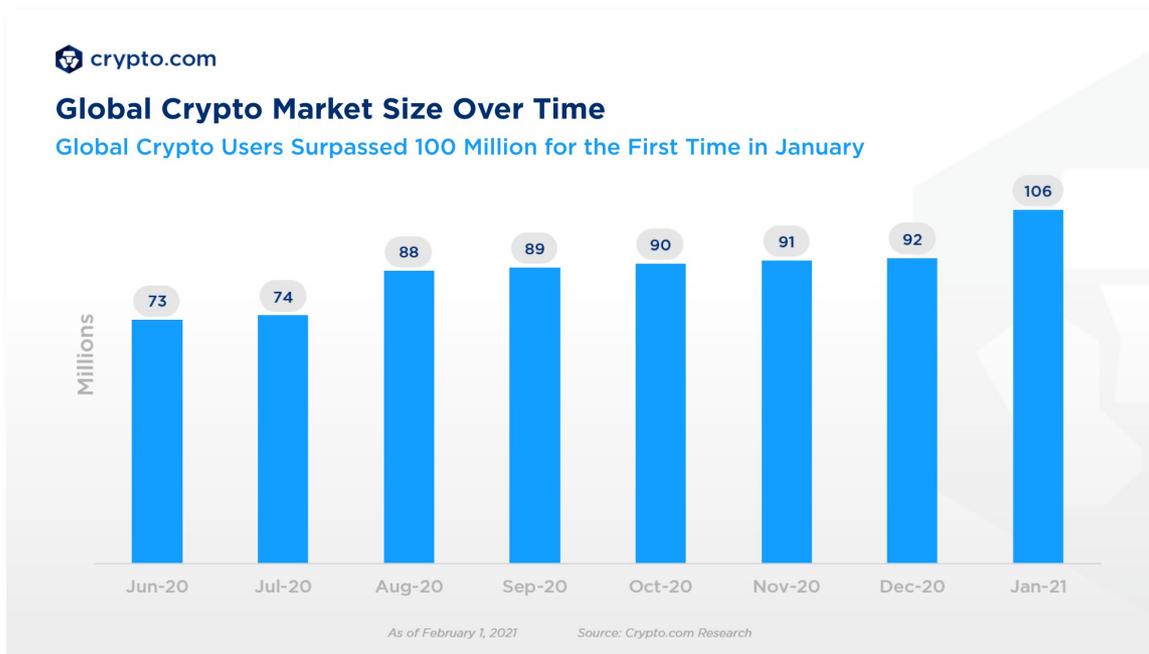
Estimating Ethereum Adoption

Step	Parameter (ETH)	Notation	Result
(1)	User deposit rate	$r_{deposit}$	33%
(2)	Total No. of on-chain overlapping addresses	$N_{on-chain\ overlapping\ addresses}$	910,564
(3)	Total No. of on-chain addresses (selected exchanges)	$N_{exchange\ total\ addresses}$	4,777,278
(4)	No. of on-chain non-overlapping addresses	$N_{on-chain\ non-overlapping\ addresses} = (3) - (2)$	3,866,714
(5)	Weighted-Average No. of exchanges per user	$k_{addresses\ per\ user}$	3.36
(6)	Selected exchanges' coverage ratio	$r_{total\ market\ share}$	92%
(7)	Total No. of ETH owners	$\frac{[(2) \div (5) + (4)]}{(1) \times (6)}$	~ 14 Mln

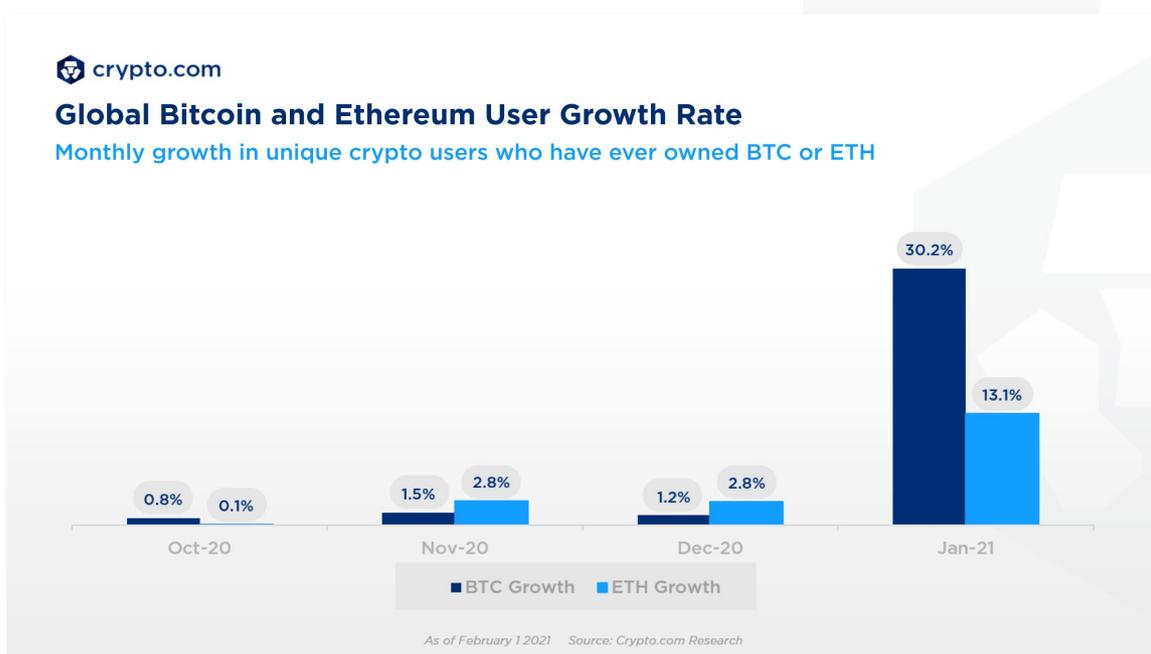
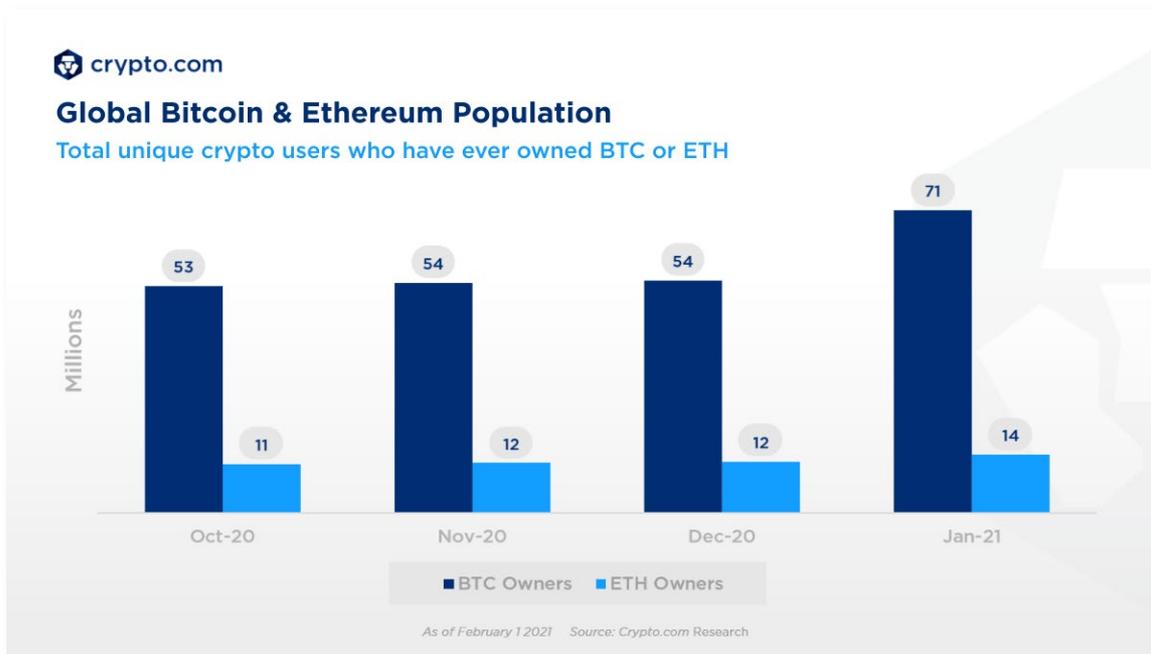
Final Aggregation

Step	Estimates	Notation	Result
(1)	BTC Owners	$N_{BTC\ owners}$	~ 71 Mln
(2)	ETH Owners	$N_{ETH\ owners}$	~ 14 Mln
(3)	Percentage of users who own both BTC & ETH	$r_{BTC\ \&\ ETH}$	25%
(4)	Percentage of users who own neither BTC nor ETH	$r_{\overline{BTC\ \&\ ETH}}$	35%
(5)	Exchange adoption rate	$r_{exchange}$	89%
(6)	Overall Crypto Population	$\frac{(1) + (2)}{[1 + (3) - (4)] \times (5)}$	~ 106 Mln

Now to take a look at how the crypto population has trended over time. We can see that June 2020, August 2020, and January 2021 were exceptionally strong months. What we notice is that periods of strong growth come after periods of strong price performance in Bitcoin.



There are two main takeaways from when the data is broken down further into Bitcoin and Ethereum. Ethereum led the crypto market's growth in August 2020, during the height of the DeFi mania. Similarly, Bitcoin saw tremendous growth in January following months of strong price action and waves of institutional adoption (PayPal, Microstrategy, and more).



Limitation and Caveats

Our analysis is built on a combination of Bitcoin and Ethereum's on-chain data, survey analysis, and Crypto.com's own internal data. While we believe that our updated methodology presents a more accurate estimate than our previous attempts, it is still subject to the following limitations and caveats:

- Our method assumed that all on-chain users still own crypto today, while at least some may have already sold their holdings
- We assumed that all the selected exchanges use the same deposit sweeping flows, although we did our best to remove exchanges that use different flows
- OTC trading and users who have never made on-chain transactions may not be effectively captured
- Sub-accounts in exchanges may not be accurately reflected
- Parameters obtained by survey may change over time
- Since all parameters are at least partially sourced from Crypto.com users (either by survey or internal data), sampling bias is inevitable
- The result has dependency on the from third-party data/tools that we have used

Summary

Key Takeaways

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